

1           1. In a gateway computer system coupled between at least one computer system  
2 and at least one remote computer system, a method of the gateway computer system  
3 dynamically converting a data structure from a first format as received at the gateway  
4 computer system from an originating computer system into a second data format compatible  
5 with a remote computer system, the method comprising:

6                 an act of identifying a sequence of format conversion modules that, when  
7 executed in sequence, converts the data structure from the first data format into the  
8 second data format;

9                 an act of converting the data structure from the first data format into an  
10 intermediate data format using the first format conversion module in the sequence of  
11 data conversion modules; and

12                 an act of converting the data structure from the intermediate data format into  
13 the second data format using at least the second format conversion module in the  
14 sequence of data conversion modules.

15  
16           2. A method in accordance with Claim 1, further comprising the following:

17                 an act of identifying the first data format as received from the originating  
18 computer system; and

19                 an act of identifying the second data format compatible with the remote  
20 computer system.

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22           3. A method in accordance with Claim 2, wherein the act of identifying the first  
23 data format comprises the following:

24                 an act of reading a content type field associated with the data structure.

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2       4. A method in accordance with Claim 2, wherein the act of identifying the  
3 second data format comprises the following:

4               an act of reading a destination address field associated with the data structure;  
5               an act of querying a database for a data format recognized by the remote  
6 computer system that is represented by the destination address within the destination  
7 address field; and  
8               an act of determining that the resulting data format returned from database is  
9 the second data format.

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11       5. A method in accordance with Claim 1, wherein the remote computer system  
12 comprises a wireless device.

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14       6. A method in accordance with Claim 5, wherein the originating computer  
15 system comprises a server computer system.

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17       7. A method in accordance with Claim 1, wherein the originating computer  
18 system comprises a wireless device.

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20       8. A method in accordance with Claim 7, wherein the remote computer system  
21 comprises a server computer system.

22  
23       9. A method in accordance with Claim 1, wherein the originating and remote  
24 computer system both comprise wireless devices.

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2       10. A method in accordance with Claim 1, wherein the originating and remote  
3 computer systems both comprise server computer systems.

4  
5       11. A method in accordance with Claim 1, further comprising the following:  
6               an act of receiving the data structure using a first protocol module that is  
7 compatible with receiving data from the originating computer system; and  
8               an act of determining a second protocol module that is compatible with  
9 delivering data to the remote computer system; and  
10              an act of transmitting the converted data structure to the remote computer  
11 system using the second protocol module.

12-----  
13       12. A method in accordance with Claim 1, further comprising the following:  
14               an act of receiving the data structure using a first network driver module that  
15 is compatible with receiving data from the originating computer system; and  
16               an act of determining a second network driver module that is compatible with  
17 delivering data to the remote computer system; and  
18               an act of transmitting the converted data structure to the remote computer  
19 system using the second network driver module.

1           13. A computer program product for use in a gateway computer system coupled  
2 between at least one originating computer system and at least one remote computer system,  
3 the computer program product for implementing a method of dynamically converting a data  
4 structure from a first format as received at the gateway computer system from an originating  
5 computer system into a second data format compatible with a remote computer system, the  
6 computer program product comprising a computer-readable medium having computer-  
7 executable instructions for performing the following:

8                 an act of identifying a sequence of format conversion modules that, when  
9                 executed in sequence, converts the data structure from the first data format into the  
10               second data format;

11                 an act of converting the data structure from the first data format into an  
12               intermediate data format using the first format conversion module in the sequence of  
13               format conversion modules; and

14                 an act of converting the data structure from the intermediate data format into  
15               the second data format using at least the second format conversion module in the  
16               sequence of format conversion modules.

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18           14. A computer-program product in accordance with Claim 13, wherein the  
19           computer-readable medium comprises a physical storage medium.

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21           15. A computer-program produce in accordance with Claim 13, wherein the  
22           computer-readable medium further comprises computer-executable instructions for  
23           performing the following:

1                   an act of identifying the first data format as received from the originating  
2                   computer system; and

3                   an act of identifying the second data format compatible with the remote  
4                   computer system.

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6         16. A computer-program product in accordance with Claim 15, wherein the  
7                   computer-executable instructions for performing the act of identifying the first data format  
8                   comprise computer-executable instructions for performing the following:

9                   an act of reading a content type field associated with the data structure.

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11         17. A computer-program product in accordance with Claim 15, wherein the  
12                   computer-executable instructions for performing the act of identifying the second data  
13                   format comprise computer-executable instructions for performing the following:

14                   an act of reading a destination address field associated with the data structure;  
15                   an act of querying a database for a data format recognized by the remote  
16                   computer system that is represented by the destination address within the destination  
17                   address field; and

18                   an act of determining that the resulting data format returned from database is  
19                   the second data format.

20

21         18. A computer-program product in accordance with Claim 13, further  
22                   comprising computer-executable instructions for performing the following:

23                   an act of receiving the data structure using a first protocol module that is  
24                   compatible with receiving data from the originating computer system; and

1                   an act of determining a second protocol module that is compatible with  
2                   delivering data to the remote computer system; and

3                   an act of transmitting the converted data structure to the remote computer  
4                   system using the second protocol module.

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6         19. A computer-program product in accordance with Claim 13, further  
7                   comprising computer-executable instructions for performing the following:

8                   an act of receiving the data structure using a first network driver module that  
9                   is compatible with receiving data from the originating computer system; and

10                  an act of determining a second network driver module that is compatible with  
11                  delivering data to the remote computer system; and

12                  an act of transmitting the converted data structure to the remote computer  
13                  system using the second network driver module.

14

1           20. In a gateway computer system coupled between at least one originating  
2 computer system and at least one remote computer system, a method of the gateway  
3 computer system dynamically converting a data structure in a first format as received at the  
4 gateway computer system from an originating computer system into a second data format  
5 compatible with a remote computer system, the method comprising the following:

6                 an act of identifying a sequence of format conversion modules that, when  
7                     executed in sequence, converts the data structure from the first data format into the  
8                     second data format; and

9                 a step for converting the data structure from the first data format into the  
10                     second data format using the sequence of format conversion modules.

11  
12           21. -- A method in accordance with Claim 20, wherein the step for converting the  
13 data structure from the first data format into the second data format comprises the following:

14                 an act of converting the data structure from the first data format into an  
15                     intermediate data format using the first format conversion module in the sequence of  
16                     data conversion modules; and

17                 an act of converting the data structure from the intermediate data format into  
18                     the second data format using at least the second format conversion module in the  
19                     sequence of data conversion modules.

20  
21           22. A method in accordance with Claim 20, further comprising the following:

22                 an act of identifying the first data format as received from the originating  
23 computer system; and

1                   an act of identifying the second data format compatible with the remote  
2                   computer system.

3

4           23. A method in accordance with Claim 22, wherein the act of identifying the  
5           first data format comprises the following:

6                   an act of reading a content type field associated with the data structure.

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8           24. A method in accordance with Claim 22, wherein the act of identifying the  
9           second data format comprises the following:

10                  an act of reading a destination address field associated with the data structure;

11                  an act of querying a database for a data format recognized by the remote  
12                  computer system that is represented by the destination address within the destination  
13                  address field; and

14                  an act of determining that the resulting data format returned from database is  
15                  the second data format.

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17           25. A method in accordance with Claim 22, wherein the remote computer system  
18           comprises a wireless device.

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20           26. A method in accordance with Claim 25, wherein the originating computer  
21           system comprises a server computer system.

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23           27. A method in accordance with Claim 20, wherein the originating computer  
24           system comprises a wireless device.

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2        28. A method in accordance with Claim 27, wherein the remote computer system  
3 comprises a server computer system.

4  
5        29. A method in accordance with Claim 20, wherein the originating and remote  
6 computer system both comprise wireless devices.

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8        30. A method in accordance with Claim 20, wherein the originating and remote  
9 computer systems both comprise server computer systems.

10  
11      31. A method in accordance with Claim 20, further comprising the following:  
12                an act of receiving the data structure using a first protocol module that is  
13 compatible with receiving data from the originating computer system; and  
14                an act of determining a second protocol module that is compatible with  
15 delivering data to the remote computer system; and  
16                an act of transmitting the converted data structure to the remote computer  
17 system using the second protocol module.

18  
19      32. A method in accordance with Claim 20, further comprising the following:  
20                an act of receiving the data structure using a first network driver module that  
21 is compatible with receiving data from the originating computer system; and  
22                an act of determining a second network driver module that is compatible with  
23 delivering data to the remote computer system; and

1                   an act of transmitting the converted data structure to the remote computer  
2                   system using the second network driver module.

3

1           33. A computer program product for use a gateway computer system coupled  
2 between at least one originating computer system and at least one remote computer system,  
3 the computer program product for implementing a method of dynamically converting a data  
4 structure in a first format as received from an originating computer system into a second  
5 data format compatible with a remote computer system, the computer program product  
6 comprising a computer-readable medium having computer-executable instructions for  
7 performing the following:

8                 an act of identifying a sequence of format conversion modules that, when  
9                 executed in sequence, converts the data structure from the first data format into the  
10               second data format; and

11                 a step for converting the data structure from the first data format into the  
12               second data format using the sequence of format conversion modules.

13  
14           34. A computer-program product in accordance with Claim 33, wherein the  
15           computer-readable medium comprises a physical storage medium.  
16

*35. A gateway computer system configured to be coupled between at least one originating computer system and at least one remote computer system, the gateway computer system configured to receive a data structure having a first data format from an originating computer system and transmit the data structure in a second format to a remote computer system, the gateway computer system comprising:*

a plurality of format conversion modules including:

a first format conversion module configured to convert data structures having a first data format into data structures having an intermediate data format; and

at least a second format conversion module configured to convert data structures having the intermediate data format into the second data format;

and  
a module for identifying the first format conversion module and the least the  
format conversion module as being a subset of the plurality of format  
modules that, when executed in sequence, result in the data structure  
converted from the first data format into the second data format.

36. The gateway computer system in accordance with Claim 35, wherein the originating computer system comprises a server computer system.

37. The gateway computer system in accordance with Claim 36, wherein the remote computer system comprises a wireless device.

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2       38. The gateway computer system in accordance with Claim 35, wherein the  
3 originating computer system comprises a wireless device.

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5       39. The gateway computer system in accordance with Claim 38, wherein the  
6 remote computer system comprises a server computer system.

7  
8       40. The gateway computer system in accordance with Claim 35, wherein the  
9 originating and remote computer systems both comprise a wireless device.

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11      41. The gateway computer system in accordance with Clam 35, wherein the  
12 originating and remote computer systems both comprise a server computer system.  
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